

Amendments to the Claims:

1. (Currently Amended) An apparatus for facilitating viewing of an object by human eye, said apparatus comprising:

 a holder mechanism comprising a support portion having opposing first and second support surfaces;

 at least one light source disposed on said holder mechanism first surface to illuminate at least a portion of the object;

 at least one electronic camera unit disposed on said holder mechanism first surface, said camera being operative to ~~record~~ capture at least one image of the object;

 at least one image processor module in electrical communication with said camera unit to format said ~~recorded~~ captured image for display;

at least one electrical image memory storage medium for storage and retrieval of both said captured image and said formatted image;

 at least one image display device having a display region, said display device disposed on said holder mechanism second surface and in electrical communication with said image processor module to display said formatted image on said display region; and

 at least one user-interface control mechanism disposed on said holder mechanism and in electrical communication with said image processor module for controlling the operations of said module to regulate display of the formatted image by the display device.

2. (Original) The apparatus of Claim 1 further comprising at least one power source housed in said holder mechanism to provide operational power to at least one of said camera unit, image processor system light sources and image display device.

3. (Original) The apparatus of Claim 1 wherein said control mechanism is to regulate at least one of a magnification and illumination intensity of the image displayed by the display device.

4. (Original) The apparatus of Claim 1 wherein said control mechanism is to regulate the display of the image by the display device in response to display adjustments by a user.

5. (Original) The apparatus of Claim 1 said holder mechanism further comprising at least one handle portion connected to said portion.

6. (Currently Amended) The apparatus of Claim 4 5 wherein said handle portion is integrally connected to said support portion.

7. (Currently Amended) The apparatus of Claim 4 5 wherein said handle portion is pivotally connected to said support portion.

8. (Original) The apparatus of Claim 1 wherein said light source portion is rotatably connected to said support portion.

9. (Original) The apparatus of Claim 1 wherein said camera unit is a charge-coupled device (CCD) camera unit.

10. (Original) The apparatus of Claim 1 wherein said display device is a liquid crystal display (LCD) device.

11. (Original) The apparatus of Claim 1 wherein said control mechanism is disposed on said support portion.

12. (Original) The apparatus of Claim 5 wherein said control mechanism is disposed on said handle portion.

13. (Original) The apparatus of Claim 1 said control mechanism further comprising at least one mode selection device for browsing and selecting at least one operation of said image processor module.

14. (Original) The apparatus of Claim 13 wherein said mode selection device is a manual input button.

15. (Original) The apparatus of Claim 13 wherein said mode selection device is a finger operated adjusting rolling switch.

16. (Original) The apparatus of Claim 13 wherein said mode selection device is a finger operated adjusting sliding switch.

17. (Original) The apparatus of Claim 13 wherein said mode selection device is a graphic user interface device.

18. (Original) The apparatus of Claim 13 wherein said mode selection device is a graphic user interface device displayed on a portion of said display region.

19. (Original) The apparatus of Claim 13 wherein said mode selection device is a voice input device.

20. (Original) The apparatus of Claim 2 wherein said power source is housed in a handle portion of said holder mechanism wherein said handle portion is connected to said support portion.

21. (Original) The apparatus of Claim 2 wherein said power source is at least one of a battery unit and an externally connected power source.

22. (Currently Amended) The apparatus of Claim 1, said image processor ~~unit~~ module comprising:

at least one processor system in electrical communication with, to receive operational data from and to control the operations of at least one of said control mechanism, said camera unit, said light sources and said display device being based on at least one predetermined instruction; and

~~at least one~~ an electrical image memory storage medium for storage and retrieval of said predetermined instruction by said processor system.

23. (Original) The apparatus of Claim 22 wherein said predetermined instruction is a user-inputted instruction received from said control mechanism.

24. (Currently Amended) The apparatus of Claim 22 wherein said predetermined instruction is said ~~recorded~~ captured image.

25. (Original) The apparatus of Claim 22 wherein said predetermined instruction is said formatted image.

26. (Original) The apparatus of Claim 22 wherein said predetermined instruction includes instructions to adjust at least one of a magnification level, an illumination intensity, an image enhancement and a focusing resolution level of said displayed image.

27. (Original) The apparatus of Claim 22 wherein said predetermined instruction includes instructions to adjust at least one of a focusing characteristic of said camera unit and the illumination intensity of said light source.

28. (Original) The apparatus of Claim 22 wherein said image processing module is a programmable image processing module.

29. (Original) The apparatus of Claim 22 further comprising:
at least one optical alpha-numeric character recognition module to recognize at least one of a word and a number in said image;

at least one voice synthesizer module to output said patterns corresponding to a pronunciation of said recognized word and number.

30. (Original) The apparatus of Claim 26 wherein said image enhancement includes at least one of an adjustment to contrast and brightness, a noise elimination, a color re-mapping, an inverse video displaying, an illumination equalization mode, image shifting, image stabilization, and image freezing.

31. (Original) The apparatus of Claim 30 wherein said noise elimination includes filtering of undesired features of said object.

32. (Original) The apparatus of Claim 30 wherein said inverse video displaying includes display text wherein the colors of text and background are switched.

33. (Currently Amended) ~~The An apparatus of Claim 30 for facilitating viewing of an object by human eye, comprising:~~

a holder mechanism comprising a support portion having opposing first and second support surfaces;

at least one light source disposed on said holder mechanism first surface to illuminate at least a portion of the object;

at least one electronic camera unit disposed on said holder mechanism first surface, said camera being operative to capture at least one image of the object;

at least one image processor module in electrical communication with said camera unit to format said captured image for display;

at least one image display device having a display region, said display device disposed on said holder mechanism second surface and in electrical communication with said image processor module to display said formatted image on said display region; and

at least one user-interface control mechanism disposed on said holder mechanism and in electrical communication with said image processor module for controlling the operations of said module to regulate display of the formatted image by the display device;

wherein the image processor module comprises at least one processor system in electrical communication with, to receive operational data from, and to control the operations of, at least one of said control mechanism, said camera unit, said light sources and said display device based on a predetermined instruction to adjust at least one of a magnification

level, an illumination intensity, an image enhancement and a focusing resolution level of said displayed image;

wherein said image enhancement includes at least one of an adjustment to contrast and brightness, a noise elimination, a color re-mapping, an inverse video displaying, an illumination equalization mode, image shifting, image stabilization, and image freezing; and

wherein said illumination equalization mode includes modification of illumination brightness over a selected display area to compensate for a non-ideal positioning of said light source.

34. (Original) The apparatus of Claim 1 wherein said apparatus is a portable apparatus.

35. (New) An apparatus for facilitating viewing of an object by human eye, said apparatus comprising:

 a holder mechanism comprising a support portion having opposing first and second support surfaces;

 at least one light source disposed on said holder mechanism first surface to illuminate at least a portion of the object;

 at least one electronic camera unit disposed on said holder mechanism first surface, said camera being operative to capture at least one image of the object;

 at least one image processor module in electrical communication with said camera unit to format said captured image for display;

 at least one image display device having a display region, said display device disposed on said holder mechanism second surface and in electrical communication with said image processor module to display said formatted image on said display region; and

 at least one user-interface control mechanism disposed on said holder mechanism and in electrical communication with said image processor module for controlling the operations of said module to regulate display of the formatted image by the display device;

 wherein the image processor module comprises at least one processor system in electrical communication with, to receive operational data from, and to control the operations of, at least one of said control mechanism, said camera unit, said light sources and said

display device based on the captured image and an electrical image memory storage medium for storage and retrieval of the captured image by said processor image.

36. (New) An apparatus for facilitating viewing of an object by human eye, said apparatus comprising:

a holder mechanism comprising a support portion having opposing first and second support surfaces;

at least one light source disposed on said holder mechanism first surface to illuminate at least a portion of the object;

at least one electronic camera unit disposed on said holder mechanism first surface, said camera being operative to capture at least one image of the object;

at least one image processor module in electrical communication with said camera unit to format said captured image for display;

at least one image display device having a display region, said display device disposed on said holder mechanism second surface and in electrical communication with said image processor module to display said formatted image on said display region; and

at least one user-interface control mechanism disposed on said holder mechanism and in electrical communication with said image processor module for controlling the operations of said module to regulate display of the formatted image by the display device;

wherein the image processor module comprises at least one processor system in electrical communication with, to receive operational data from, and to control the operations of, at least one of said control mechanism, said camera unit, said light sources and said display device based on the formatted image and an electrical image memory storage medium for storage and retrieval of the formatted image by said processor system.

37. (New) An apparatus for facilitating viewing of an object by human eye, said apparatus comprising:

a holder mechanism comprising a support portion having opposing first and second support surfaces;

at least one light source disposed on said holder mechanism first surface to illuminate at least a portion of the object;

at least one electronic camera unit disposed on said holder mechanism first surface, said camera being operative to capture at least one image of the object;

at least one image processor module in electrical communication with said camera unit to format said captured image for display;

at least one image display device having a display region, said display device disposed on said holder mechanism second surface and in electrical communication with said image processor module to display said formatted image on said display region; and

at least one user-interface control mechanism disposed on said holder mechanism and in electrical communication with said image processor module for controlling the operations of said module to regulate display of the formatted image by the display device;

wherein the image processor module comprises at least one processor system in electrical communication with, to receive operational data from, and to control the operations of, at least one of said control mechanism, said camera unit and said light sources.

38. (New) An apparatus for facilitating viewing of an object by human eye, comprising:

a holder mechanism comprising a support portion having opposing first and second support surfaces;

at least one light source disposed on said holder mechanism first surface to illuminate at least a portion of the object;

at least one electronic camera unit disposed on said holder mechanism first surface, said camera being operative to record or capture at least one image of the object;

at least one image processor module in electrical communication with said camera unit to format said recorded or captured image for display;

at least one image display device having a display region, said display device disposed on said holder mechanism second surface and in electrical communication with said image processor module to display said formatted image on said display region; and

at least one user-interface control mechanism disposed on said holder mechanism and in electrical communication with said image processor module for controlling the operations of said module to regulate display of the formatted image by the display device;

Application No.: 09/827,135
Response to Office Action of July 07, 2004
Attorney Docket: JUNGC-001A

wherein the image processor module comprises at least one processor system in electrical communication with, to receive operational data from, and to control the operations of, at least one of said control mechanism, said camera unit, said light sources and said display device to adjust a magnification level, illumination intensity, image enhancement and focusing resolution level of said displayed image.